

What Is Claimed Is:

1. A method for forming an alignment layer of a liquid crystal display device, comprising:

providing a substrate having a plurality of unit panels formed thereon;

loading the substrate onto a stage;

selectively dropping an alignment material onto a first one of the unit panel regions by an alignment material dropping unit having a plurality of heads, each of the heads having a plurality of holes arranged along a row at regularly-spaced interval distance d_1 ; and

forming an alignment layer on the substrate to have a uniform thickness.

2. The method according to claim 1, wherein the selective dropping of the alignment material onto the substrate comprises:

performing a first positioning of the alignment material dropping unit at a first side of the stage;

performing a second positioning of the alignment material dropping unit at a second side of the stage along a first direction;

dropping a first alignment material onto the substrate along the first direction during the performing of the first and second positionings of the alignment material dropping unit;

shifting the alignment material dropping unit by a distance $h1$ along a second direction perpendicular to the first direction; and

dropping a second alignment material along the second direction.

3. The method according to claim 2, wherein the distance $h1$ is smaller than the distance $d1$.
4. The method according to claim 2, wherein the first and second positionings of the alignment material dropping unit includes moving the stage.
5. The method according to claim 2, wherein the first and second positionings of the alignment material dropping unit includes moving the alignment material dropping unit.
6. The method according to claim 2, wherein the performing a first positioning of the alignment material dropping unit includes moving the stage, and the performing a second positioning of the alignment material dropping unit includes moving the alignment material dropping unit.

7. The method according to claim 2, wherein the performing a first positioning of the alignment material dropping unit includes moving the alignment material dropping unit, and the performing a second positioning of the alignment material dropping unit includes moving the stage.

8. The method according to claim 1, wherein the step of dropping the alignment material on the substrate comprises:

performing a first positioning of a first end of the alignment material dropping unit at a first position of a first side of the stage;

performing a second positioning of a second end of the alignment material dropping unit at a second position of a second side of the stage along a first direction;

dropping the first alignment material onto the substrate along the first direction during the performing of the first and second positioning of the alignment material dropping unit;

displacing the first end of the alignment material dropping unit along the first side from the first position while maintaining the second end of the alignment material dropping unit at the second position of the second side of

the stage, thereby creating an angle θ between a third side of the stage and a side of the alignment material dropping unit; and

dropping the second alignment material onto the substrate along a second direction opposite to the first direction.

9. The method according to claim 8, wherein the angle θ is within a range of about $0^\circ < \theta$ and about $\theta < 90^\circ$.

10. The method according to claim 8, wherein the first positioning of a first end of the alignment material dropping unit and the second positioning of a second end of the alignment material dropping unit includes moving the stage.

11. The method according to claim 8, wherein the first positioning of a first end of the alignment material dropping unit and the second positioning of a second end of the alignment material dropping unit includes moving the alignment material dropping unit.

12. The method according to claim 8, the first positioning of a first end of the alignment material dropping unit includes moving the stage, and the second positioning of a second end of the alignment material dropping unit includes moving the alignment material dropping unit.

13. The method according to claim 8, wherein the first positioning of a first end of the alignment material dropping unit includes moving the alignment material dropping unit, and the second positioning of a second end of the alignment material dropping unit includes moving the stage.

14. An apparatus for forming an alignment layer of a liquid crystal display device, comprising:

an alignment material dropping unit including a plurality of heads each having a plurality of holes for dropping an alignment material onto a substrate;

an alignment material supplying unit for supplying an alignment material to the alignment material dropping unit; and

a connection line unit for connecting the alignment material dropping unit and the alignment material supply unit,

wherein a first portion of the plurality of heads are disposed at an angle θ with respect to a second portion of the plurality of heads.

15. An apparatus for forming an alignment layer of a liquid crystal display device, comprising:

an alignment material dropping unit having a plurality of holes arranged in an offset pattern for dropping an alignment material onto a substrate;

an alignment material supply unit for supplying an alignment material to the alignment material dropping unit; and

a connection line unit for connecting the alignment material dropping unit and the alignment material supplying unit.

16. The apparatus according to claim 15, wherein the plurality of holes includes a first plurality of holes disposed along a first row and a second plurality holes disposed along a second parallel to the first row, each of adjacent ones of the first plurality of holes and each of adjacent ones of the second plurality of holes separated by a first interval $d1$ and each of adjacent ones of the first and second pluralities of the holes separated by a second interval $d2$ smaller than the first interval $d1$.